STEREO POWER AMPLIFIER

KAC-820

SERVICE MANUAL

KENWOOD

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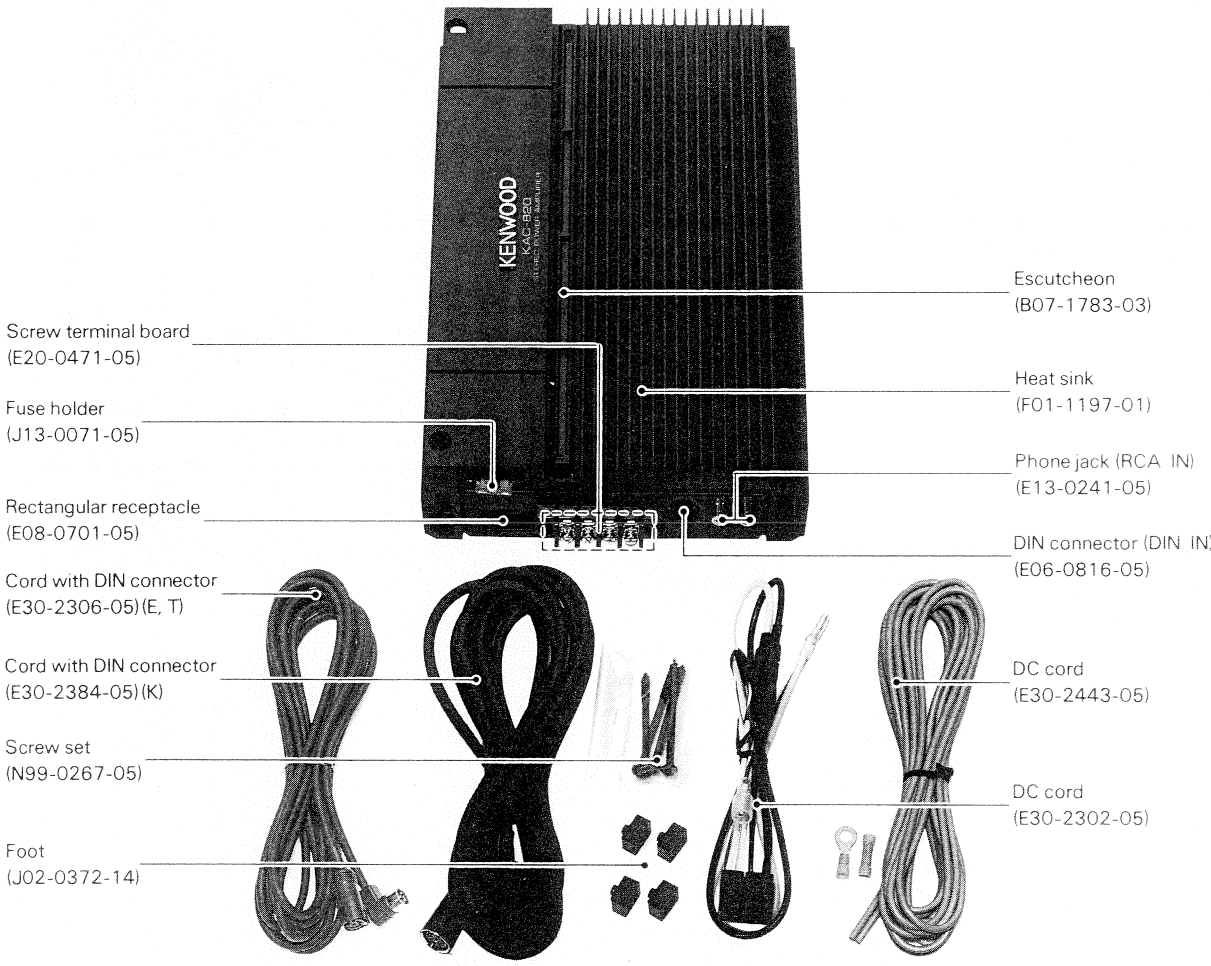
B51-3443-00(B)2496



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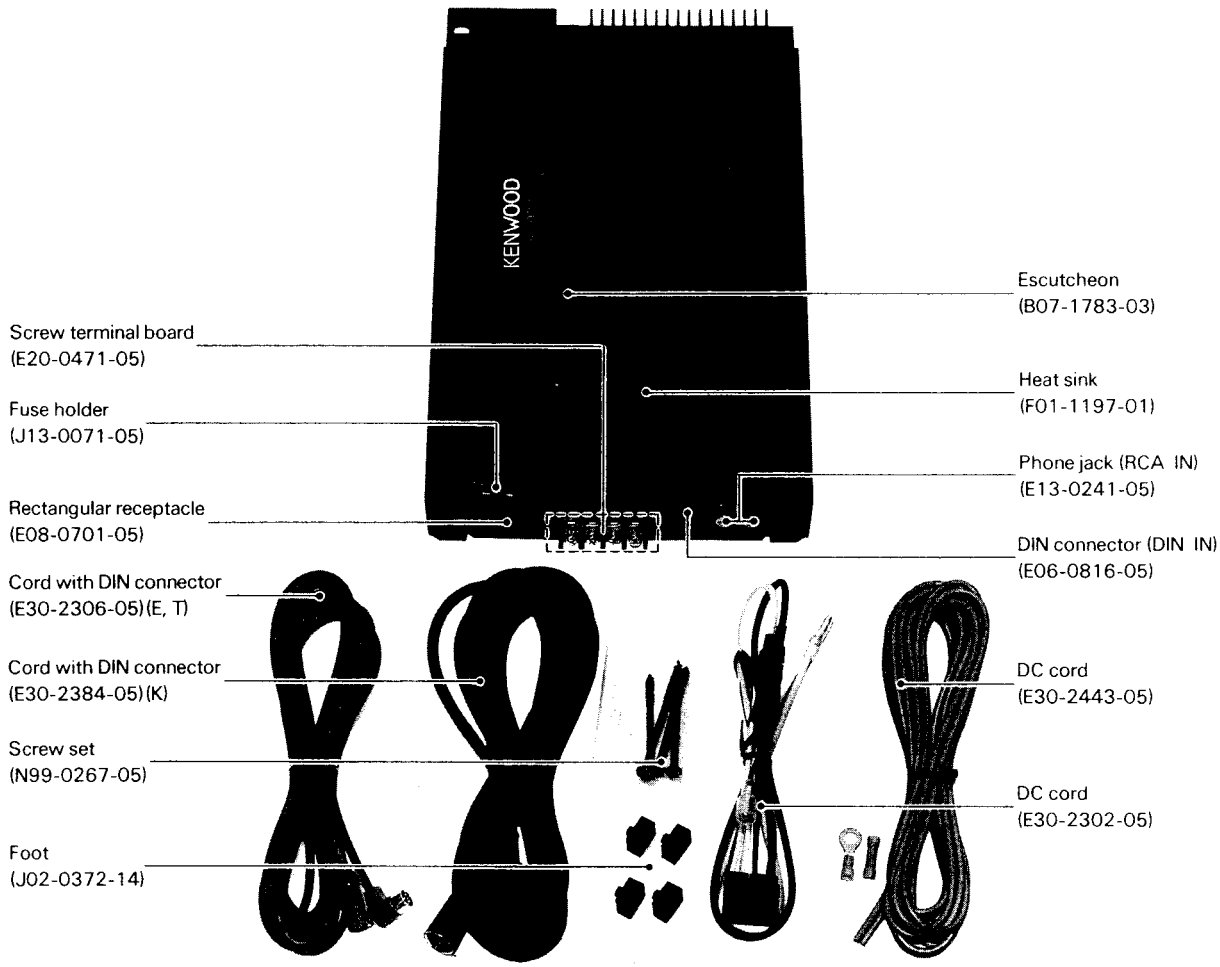

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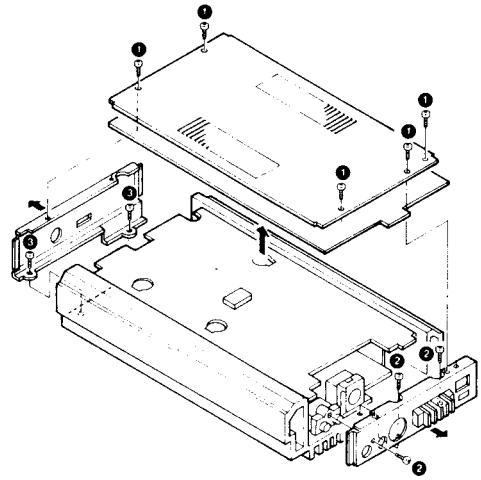
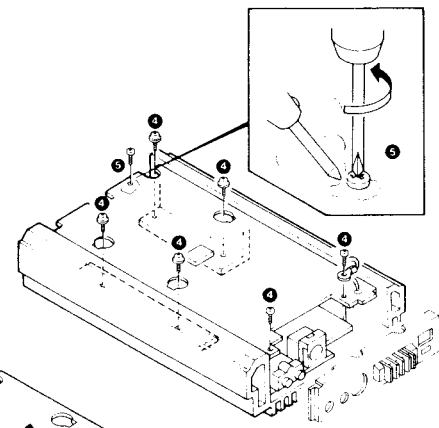
DISASSEMBLY FOR REPAIR

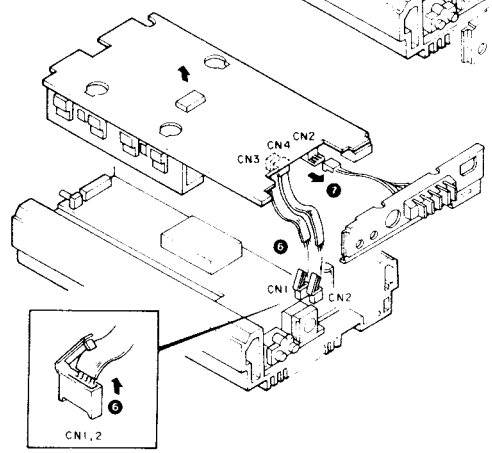
1. Remove the 5 screws (❶) from the bottom cover.
2. Remove the 3 screws (❷) from the rear panel.
3. Remove the 2 screws (❸) from the front panel.



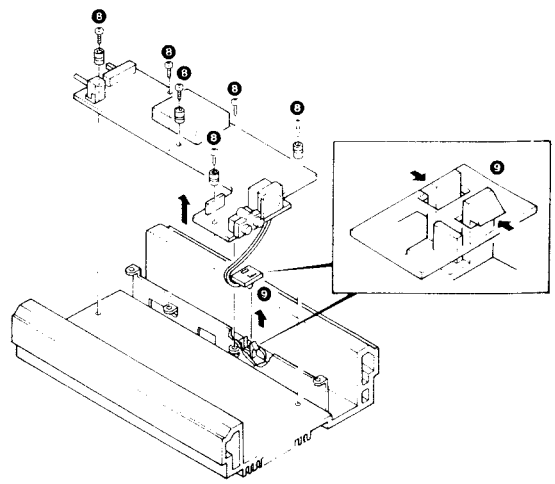
4. Remove the 6 screws (❹) from the PC Board.
5. Melt the solder fixing the screw (❺), and remove the screw using a screwdriver.



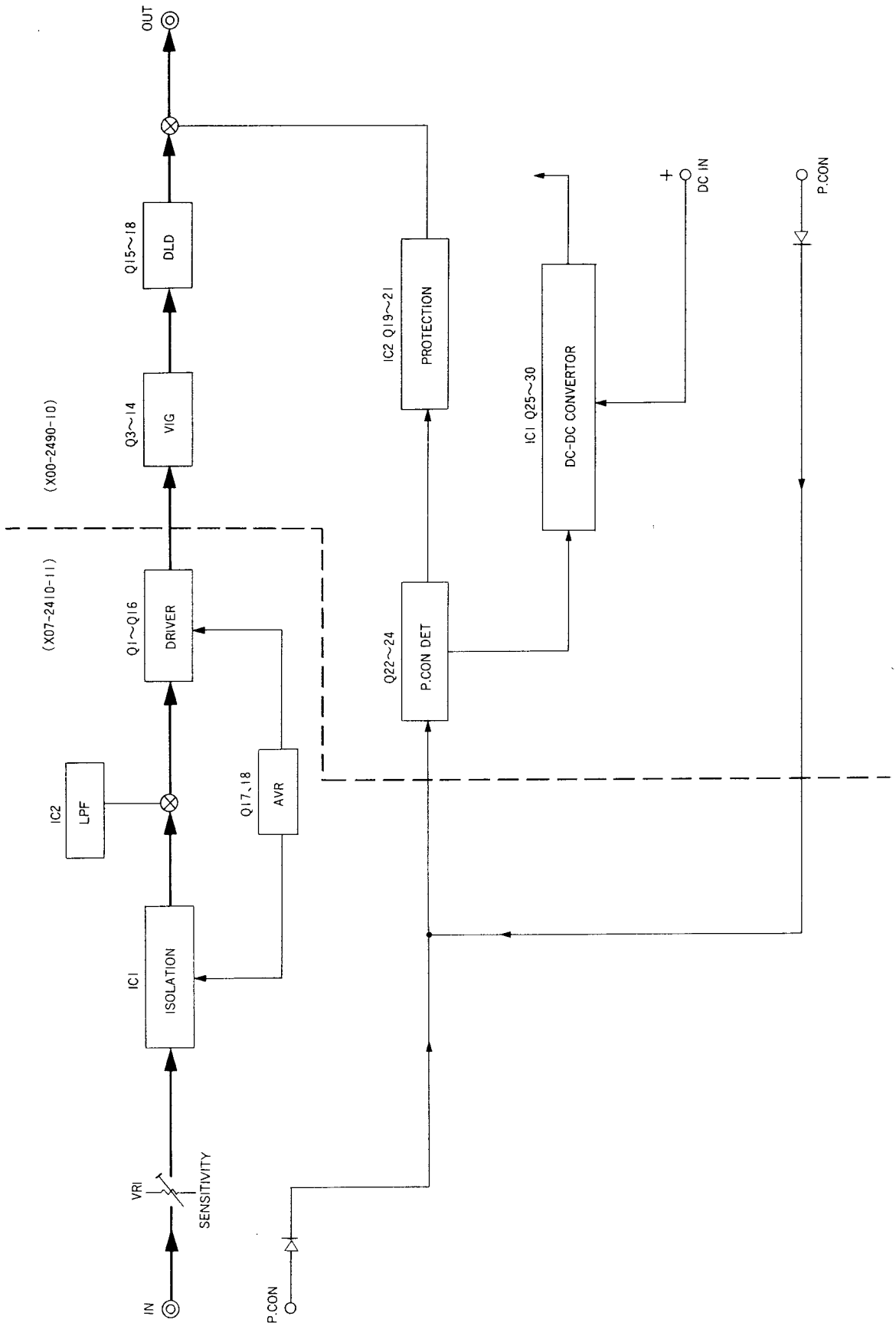
6. Disconnect connectors CN1 and CN2 (❻).
7. Disconnect connector CN4, and remove the PC Board in the direction of the arrow (❼).



8. Remove the 6 screws (❽) from the PC Board.
9. Remove the PC Board on which the diode is mounted, by pushing the lug on the PC Board in the direction of the arrow (❾).



BLOCK LEVEL DIAGRAM



CIRCUIT DESCRIPTION

Function of components

Power Amplifier Unit (X07-2410-11)

Components	Use/Function	Operation/Condition/Interchangeability
Q1, 2	Input mute	Operates the input muting function with quick timing than relay when amplifier is OFF, to cut the relay in dead line (non-signal) for protection of contacts.
Q3, 4	Mute driver	When the base of Q3 is active high, Q3 and Q4 are turned ON to activate muting function.
Q5, 6	Input differential amp	Applies input to one end and negative feedback to the other end to determine the amplifying gain, while setting the output of speaker ends to DC zero.
Q7 ~ 10	2nd differential amp	
Q11 ~ 14	3rd differential amp	
Q15, 16	Current mirror	Load of Q13, Q14 of third stage differential circuit.
Q17	+20 V AVR	
Q18	−20 V AVR	
Q19	LED SW	
IC1	Isolation amp	Eliminates automobile noise introduced to the amplifier input.
IC2	Operation amp	Consists the active LPF (low pass filter) for Sub Woofer.

CIRCUIT DESCRIPTION

Power Supply Unit (X00-2490-10)

Components	Use/Function	Operation/Condition/Interchangeability
Q1	Temp compensation (Lch)	
Q2	Temp compensation (Rch)	
Q3～10	VIG cascade	For stabilization of the collector voltage at the driver of amplifier section.
Q11～14	Power amp driver	
Q15～18	Power	
Q19～21	Current detector	Detects overcurrent and controls the protection IC.
Q22	P. CON voltage detector	
Q23	Detects the P. CON "ON"	When Q22 is turned ON by receiving P. CON signal, Q23 turns ON to pull out the base voltage of Q24.
Q24	Power switch	When Q23 is turned ON and the base voltage is pulled out, Q24 is turned ON and the power voltage is supplied to IC1.
Q25, 26	Switching driver	
Q27～30	Switching power	
IC1	Switching regurator (control IC)	Provides the dead time on switching waveform.
IC2	Protection	Detects overload, DC offset and P. CON.

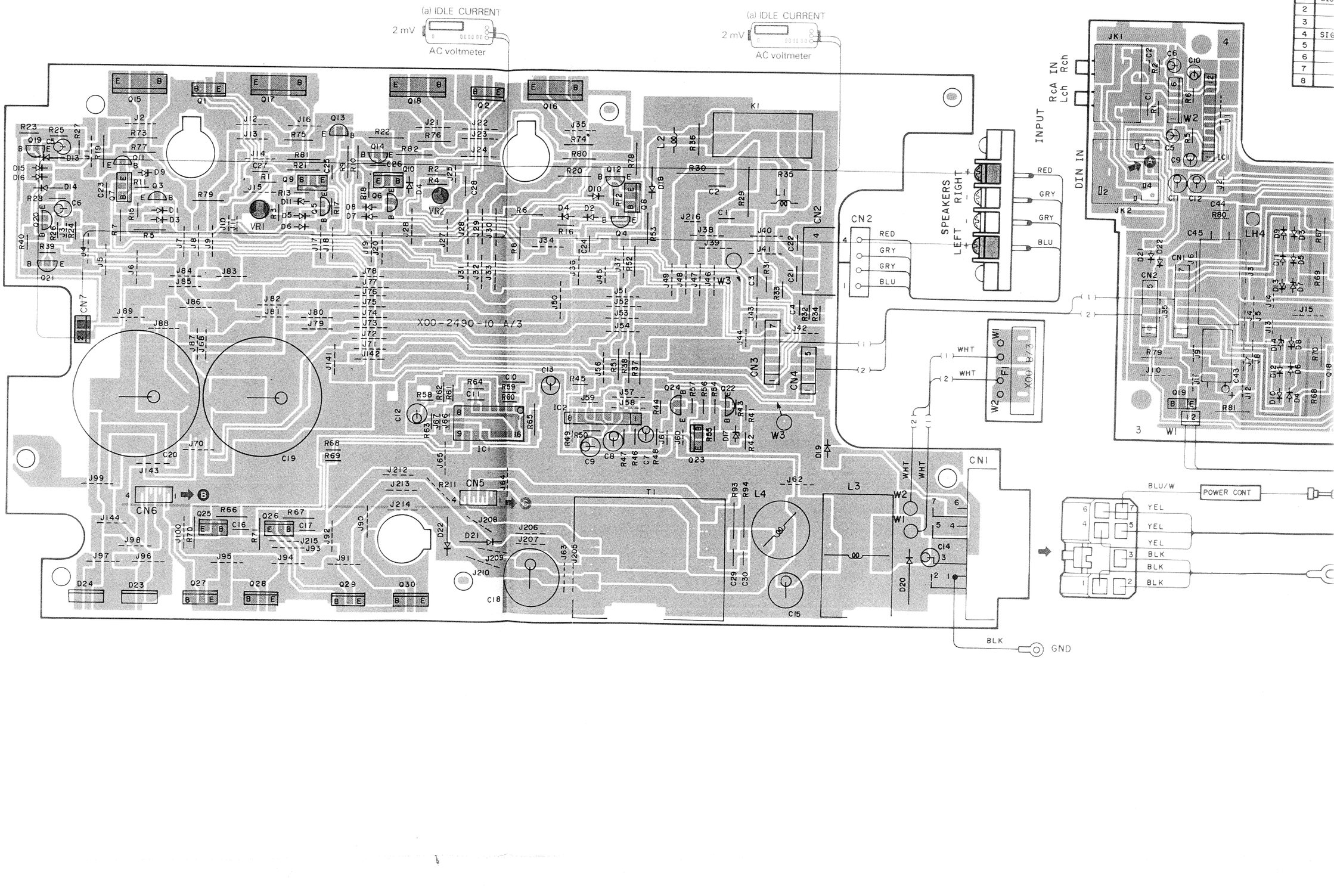
ADJUSTMENT/REGLAGE/ABGLEICH

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
	Connect a cassette deck.						
1	IDLE CURRENT	–	Connect a DC voltmeter to: CN7 (L, R)	VOLUME: 0	VR1 (L) VR2 (R)	2mV	(a)

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINT L'ALIGNEMENT	ALIGNER POUR	FIG.
	Raccorder une platine à cassette.						
1	COURANT DE POLARISATION	–	Raccorder un voltmètre CC à: CN7 (G, D)	VOLUME: 0	VR1 (G) VR2 (D)	2mV	(a)

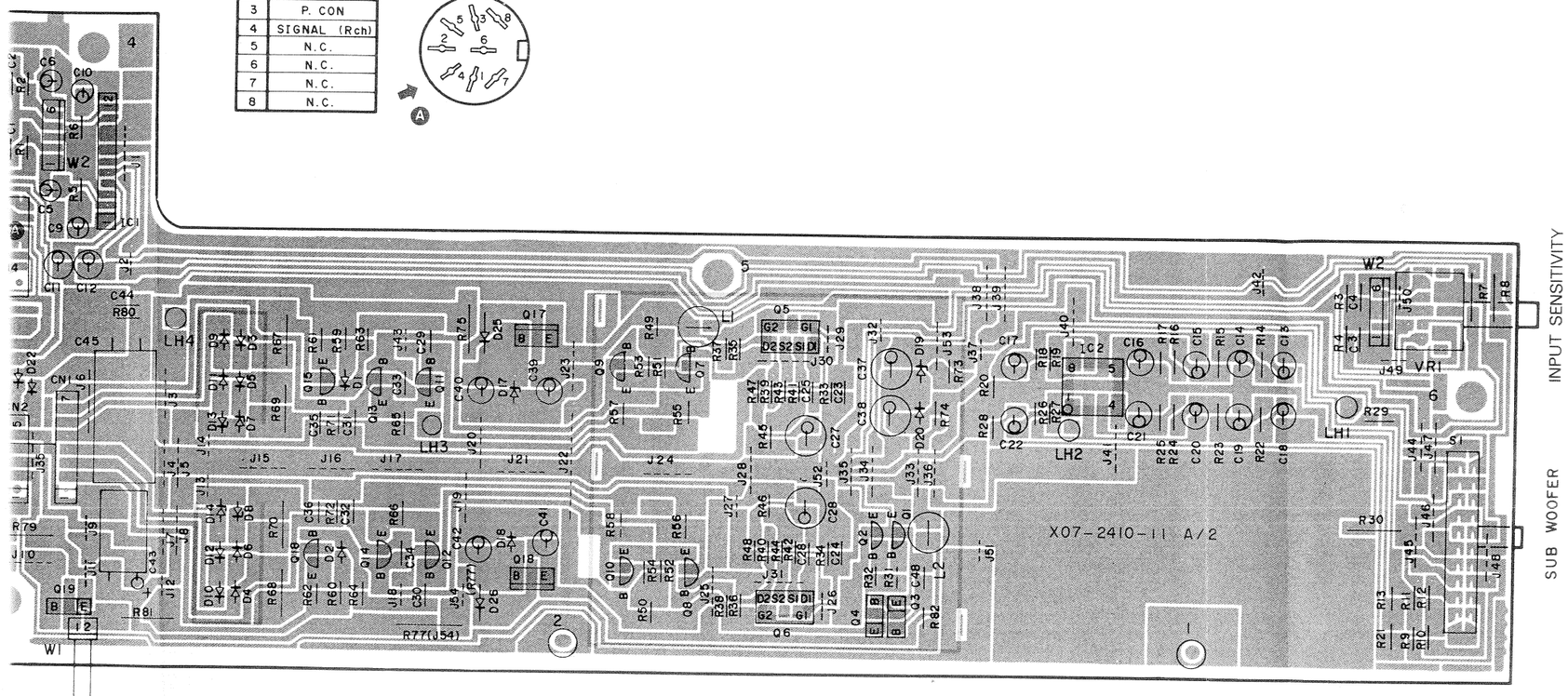
NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VERSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
	Ein Kassettendeck anschließen.						
1	LEERLAUFSTROM	–	Einen Gleichstrom-Voltmeter anschließen an: CN7 (L, R)	VOLUME: 0	VR1 (L) VR2 (R)	2mV	(a)

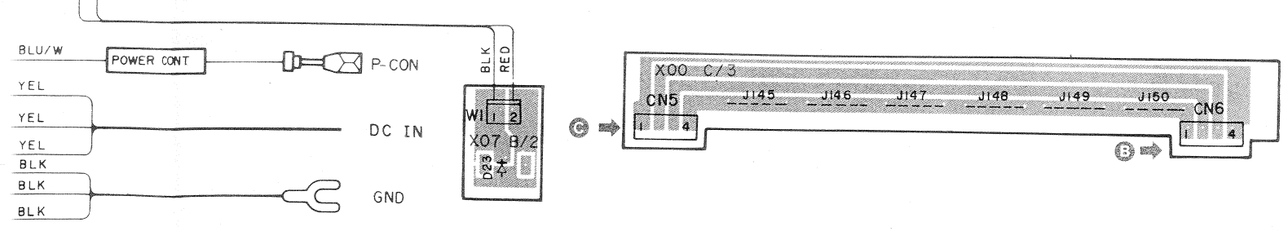
PC BOARD (Component Side View)



1	SIGNAL (Lch)
2	GND
3	P. CON
4	SIGNAL (Rch)
5	N.C.
6	N.C.
7	N.C.
8	N.C.

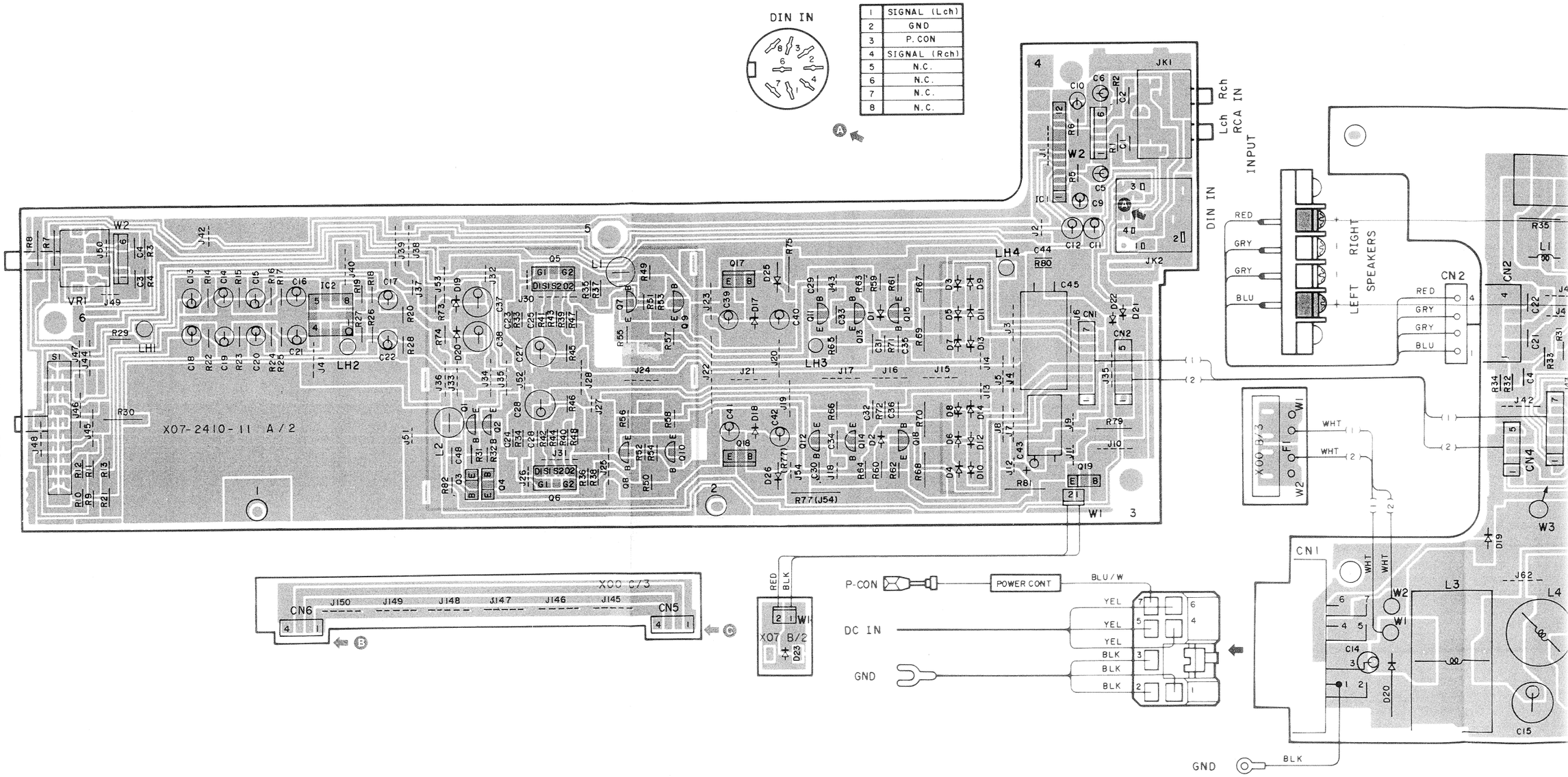
DIN IN



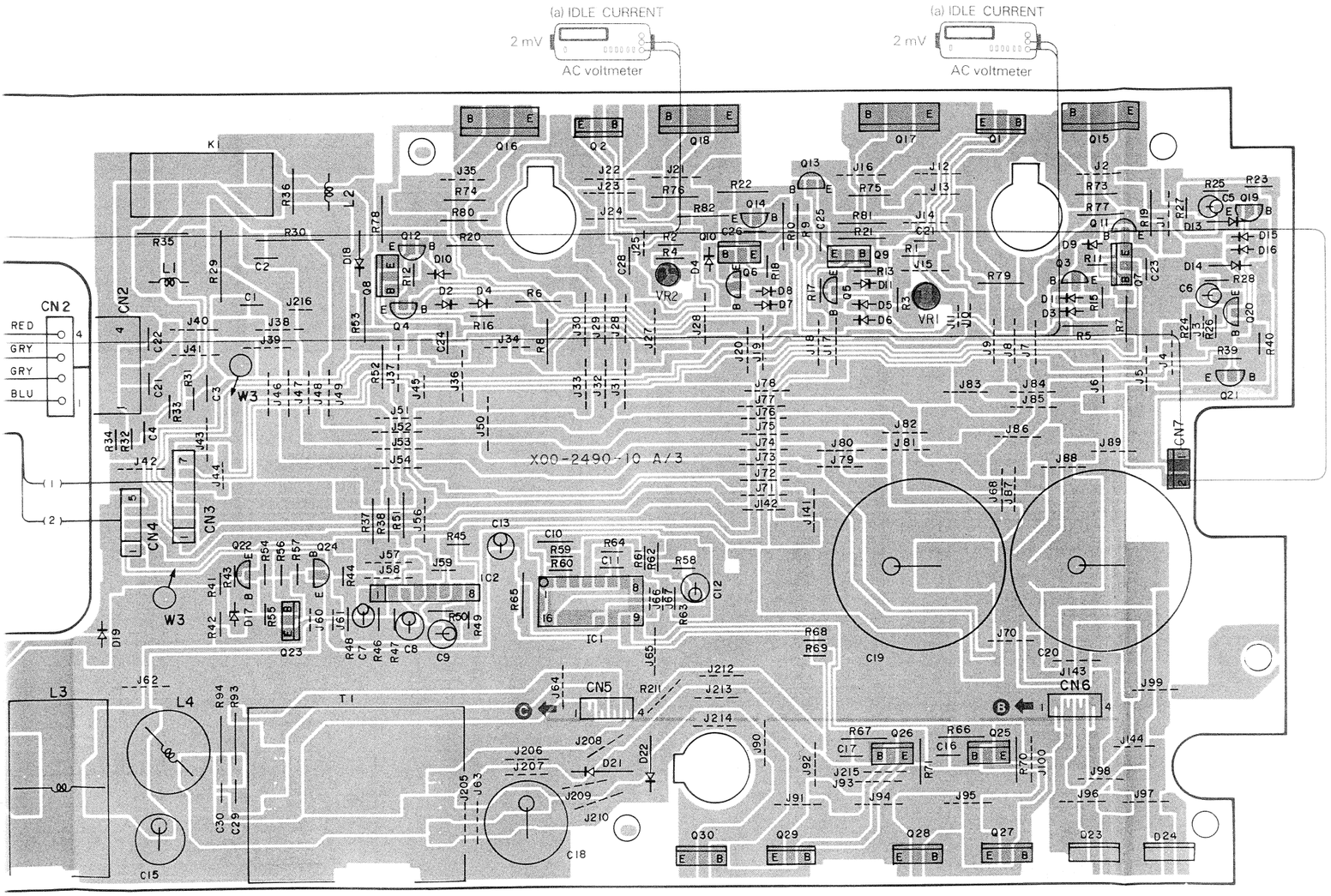


Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Foil Side View)



Refer to the schematic diagram for the values of resistors and capacitors.


(a) IDLE CURRENT
2 mV
AC voltmeter
(a) IDLE CURRENT
2 mV
AC voltmeter
X00-2490-10 A/3
CN2
RED
GRY
GRY
BLU
CN3
CN4
CN5
CN6
CN7
W3
K1
L2
L3
L4
T1
VR1
VR2
IC1
IC2
C15
C18
C19
C20
Q16
Q2
Q18
Q17
Q1
Q15
Q30
Q29
Q28
Q27
Q26
Q25
Q23
D23
D24

KAC-820

IC1	KKM61	Q5,6	2SK389	D1,2,21,22	ISS176
IC2	μPC4570C	Q7~10	2SA992(F,E)	D17,18	RD20JS(B)
		Q11~14	2SC2631(Q,R)	D19,20	RD16JS(B)
Q1,2	2SD1302	Q15,16	2SA1123(Q,R)	D23	B30-1130-05
Q3,19	DTC124EFF	Q17	2SD1266(Q,P)	D25,26	E-152
Q4	DTA124EFF	Q18	2SB772(Q,P)		

D1~8,15,16,19	ISS176
D9~12	MTZ4.7J
D13,14,18	IS2076A
D17	RD5.1JS(B2)
D20	RM4ZLF-J1
D21,22	EH1Z
D23	FMU2IS
D24	FMU2IR

(X07-2410-11)(A/2)

(X00-2490-10)(A/3)

SENSITIVITY

SUB WOOFER

S1

50Hz OFF 100Hz

R3 390 R4 390 VR1 20K(B) C3 220P C4 220P R8 22K 1/4W

R9 220 R10 220 R12 220 R11 220

C12 10μ16 C11 10μ16 R7 22K 1/4W

W2

ISO AMP

IC1

C5 10μ16 C7 470P C9 100μ10 C10 100μ10 C6 10μ16 C48 150P

P.GND GND P.GND

15V Vcc -15V Vcc

JK1 L ch RCA IN R ch

R1 620 R2 620 C1 1000P C2 1000P R5 1K R6 1K

DIN IN

JK2

C44 0.1 R80 10K C45 1000μ16 D21

R81 5.6K 1/2W

W1 (RED) D23 POWER IND.

(X07-2410-11)(B/2)

LED SW

Q19 22K 22K

50Hz IC2 (1/2)

R14 1K R15 2.4K R16 2K C13 100μ10 C14 2.2μ50 C15 4.7μ25 R17 100K C16 0.33μ50 R18 100 R19 300 C17 100μ10

100Hz IC2 (2/2)

R22 1K R23 2.4K R24 2.4K C18 100μ10 C19 1μ50 C20 2.2μ50 R25 100K C21 0.15μ50 R26 100 R27 300 C22 100μ10

LPF

R13 1K R21 1K R29 100 637 220μ16 R30 100 1/4W D19 D20 R20 22K R28 22K C38 220μ16

D22

R73 270 Lm 1m

19V AVR +20 Q17 R75 10 1/2W D25 C39 1μ50 C40 22μ10 D17

Q7~10 2nd DIFF AMP

R35 6.8K R37 6.8K C25 4700P R39 56 R49 1.8K R51 10 R53 10

Q7 Q9 Q5 Q1

MUTE

R41 10 R43 10 0.4V DIFFERE AMP R45 12K

R31 100K C23 220P R33 2.2K R47 390 C27 470μ10 R55 750 R57 750

Q15 CURRENT MIRROR R67 100 1/4W

R59 91 R61 91 D1 R63 22K -12V C35 R71 75K C31 8P C33 5P R69 100 1/4W C29 22P Q11 Q13

CN3 NF NPN PNP GND PNP NPN NF

CN1

R65 91 R66 91 3rd DIFF AMP Q12 Q14 C30 22P C34 5P C32 8P R70 100 1/4W R72 75K C36 6P

R46 12K DIFFERE AMP R32 100K C24 220P R34 2.2K R42 10 R44 10 Q2 MUTE

R40 56 C26 4700P R36 6.8K R38 6.8K R52 10 R34 10 R50 1.8K Q6 Q8 Q10

R64 22K R68 100 1/4W Q16 CURRENT MIRROR D2 R60 91 R62 91

MUTE DRIVER

22K 22K Q4 Q3 22K 22K

-19V AVR -20 Q18 R77 10 D26 C41 1μ50 C42 4.7μ25 D18 C46 100P R82 100K

R74 270 Lm 1m

C43 220μ50 R79 10 1/2W CN2 MUTE +B -B GND P.CONT

CN4

1.2V Q1 R1 1.8K VR1 220 R3 510 IDLE C27 1000P R9 100 1/4W -1.2V

C28 1000P R10 100 1/4W R4 510 VR2 220 R2 1.8K IDLE Q2

R7 100 1/4W R5 39K 1/4W R8 100 1/4W R6 39K 1/4W

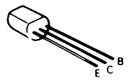
D1 D3 D9 D5 D6 D7 D8 D2 D4 D10

SIGN GND +B L -B L

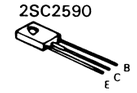
D1~8,15,16,19	: ISS176	Q1,2	: 2SC3419	Q17,18	: 2SA1671*5	IC1	: μPC494C
D9~12	: MTZ4.7J	Q3,4	: 2SA992(F,E)	Q21,22,24	: 2SA733(A)(Q,P)	IC2	: μPC1237HA
D13,14,18	: IS2076A	Q5,6,19,20	: 2SC1845(F,E)	Q23	: 2SC2785(H,F,E)		
D17	: RD5.1JS(B2)	Q7,8	: 2SC2590(Q,R)	Q25,26	: 2SD809	THI	: PTH487A0IBC222T
D20	: RM4ZLF-J1	Q9,10	: 2SA1110(Q,R)	Q27~30	: 2SD1062(Q,R)		
D21,22	: EHIZ	Q11,12	: 2SC2003(L,K)				
D23	: FMU2IS	Q13,14	: 2SA954(L,K)				
D24	: FMU2IR	Q15,16	: 2SA4386*5				

(X00-2490-10)(C/3)

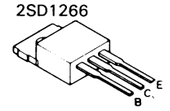
2SA1123
2SA733(A)
2SA954
2SA992
2SC1845
2SC2003
2SC2631
2SD1302



2SA1110
2SB772
2SC2590

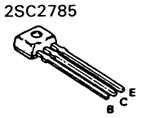


2SD1266

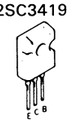


DTA124EFF
DTC124EFF

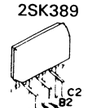
2SC2785



2SC3419



2SK389



X00-2490-10)(A/3)

IDLE DETECTOR CN7

CN2 L R

CN6 CN5

DC-DC CONVERTOR

IC1 ERROR AMP REFERENCE REGULATOR OSCILLATOR

SW REGULATOR

BEAT CANCELLER ADJ.

POWER

VIG

IDLE

IC2 PROTECTION

OVER LOAD DET. OFFSET VOL. DET. FLIP-FLOP VCC ON MUTE AC OFF DET. RELAY DRIVER AUTO RECOVERY LATCH SW

THI: TEMP. PROTECTION

P. CON DETECTOR

(X00-2490-10)(B/3)

F1 20A

CN1

DC IN

KAC-820

2SD1062

2SD809

2SA1671*5
2SC4386*5

UPC494C

UPC4570C

KKM61

UPC1237HA

SIGNAL LINE
GND LINE
+B LINE
-B LINE

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. geringfügig.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

KAC-820

KENWOOD

EXPLODED VIEW

Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

* New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

＊ 新規部品
(注)部品番号がないものは修理用部品として扱いません。

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
KAC-820						
1	3B	*	A20-5413-03	PANEL		
2	3A	*	A23-3721-03	REAR PANEL		
6	3B	*	B07-1783-03	ESCUTCHEON		
7	3B	*	B19-0541-04	LIGHTING BOARD		
8	3B	*	B43-0283-04	KENWOOD BADGE		
-			B46-0100-10	WARRANTY CARD		
-		*	B50-8634-00	INSTRUCTION MANUAL(ENG,FRE)		
-		*	B50-8897-00	INSTRUCTION MANUAL(GER,ITA)	ET	
-			B58-0803-13	CAUTION CARD	E	
-			B58-0870-04	CAUTION CARD		
-			B58-0872-04	CAUTION CARD		
12	3B	*	E20-0471-05	SCREW TERMINAL BOARD(SPEAKERS)		
13	1B	*	E30-2302-05	DC CORD		
14	1B	*	E30-2443-05	DC CORD		
15	1B	*	E30-2306-05	CORD WITH DIN CONNECTOR	ET	
15	1B	*	E30-2384-05	CORD WITH DIN CONNECTNR	K	
19	3A	*	F01-1197-01	HEAT SINK		
F1	3B	*	F05-2038-05	FUSE (20A)		
F2	1B	*	F05-2131-05	FUSE (FUSIBLE RING WIRE)		
-		*	H01-7727-04	ITEM CARTON CASE		
-		*	H03-0985-04	OUTER CARTON CASE		
-		*	H10-3523-13	POLYSTYRENE FOAMED FIXTURE		
-			H25-0112-04	PROTECTION BAG (180X250X0.05)		
-			H25-0192-04	PROTECTINN BAG (125X160X0.05)		
-			H25-0321-04	PROTECTION BAG		
23	1B	*	J02-0372-14	FOOT		
24	2A,2B	*	J19-2932-04	UNIT HOLDER		
28	3A,3B		N29-0252-05	RETAINING RING (Ø2)		
29	1B	*	N99-0267-05	SCREW SET		
A	2A,3B		N09-1955-05	MACHINE SCREW (M3X4)		
B	1A,1B	*	N09-1956-05	TAPTITE SCREW (M2.6X5)		
C	3B		N09-1965-05	TAPTITE SCREW		
F	3B	*	N09-1904-05	TAPTITE SCREW		
31	2B	*	W01-0188-08	ACCESSORY		
POWER SUPPLY UNIT (X00-2490-10)						
C1 ,2			CF92V1H473J	MF 0.047UF J		
C3 ,4			CC45FSL1H331J	CERAMIC 330PF J		
C5 -7			C90-0508-05	ELECTRO 2.2UF 50WV		
C8		*	CE04DW0J101M	ELECTRO 100UF 6.3WV		
C9			CE04DW1C100M	ELECTRO 10UF 16WV		
C10			CF92V1H224J	MF 0.22UF J		
C11			CF92V1H102J	MF 1000PF J		
C12			CE04DW1C100M	ELECTRO 10UF 16WV		
C13			CE04DW1H3R3M	ELECTRO 3.3UF 50WV		
C14			CE04DW1C100M	ELECTRO 10UF 16WV		
C15			C90-1403-05	ELECTRO 1000UF 16WV		
C16 ,17			CF92V1H104J	MF 0.10UF J		
C18		*	C90-1634-05	ELECTRO 3900UF 16WV		
C19 ,20		*	C90-1617-05	ELECTRO 3900UF 42WV		
C21 ,22			CF92V1H472J	MF 4700PF J		

E: Scandinavia & Europe K: USA P: Canada W:Europe
U: PX(Far East, Hawaii) T: England M: Other Areas
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⚠ indicates safety critical components.

PARTS LIST

＊ New Parts
Parts without **Parts No.** are not supplied.
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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C23 -26			CF92V1H222J	MF 2200PF J		
C27 ,28			CF92V1H102J	MF 1000PF J		
C29 ,30			CF92V1H272J	MF 2700PF J		
CN1	2B	*	E08-0701-05	RECTANGULAR RECEPTACLE(PWR IN)		
33	3B		J13-0071-05	FUSE HOLDER		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
L3		*	L33-0341-05	LINE FILTER COIL		
L4		*	L33-0331-05	CHOKE COIL		
T1		*	L19-0053-05	TRANSFORMER FOR CONVERTER		
J	2A,2B		N09-0333-05	TAPPING SCREW (Ø3X12)		
L	1B	*	N09-1990-05	EVATITE SCREW (Ø3X8)		
R19 -22		*	RD14DB2H101J	SMALL-RD 100 J 1/2W		
R29 ,30		*	RS14DB3D100J	FL-PROOF RS 10 J 2W		
R35 ,36			RD14DB2H10CJ	SMALL-RD 10 J 1/2W		
R51 ,52		*	RD14DB2H151J	SMALL-RD 150 J 1/2W		
R73 -76			R92-0205-05	METAL-PLATE 0.1 K 2W		
R77 ,78			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R81 ,82			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R93 ,94			RD14DB2H100J	SMALL-RD 10 J 1/2W		
VR1 ,2		*	R12-0092-05	TRIMMING POT.(220) IDLE		
VR3			R12-1069-05	TRIMMING POT.(4.7K) BEAT CANC		
K1	2A	*	S51-2078-05	MAGNETIC RELAY		
D1 -8			1SS176	DIODE		
D9 -12			MTZ4.7J	ZENER DIODE		
D13 ,14			1S2076A	DIODE		
D15 ,16			1SS176	DIODE		
D17			RD5.1JS(B2)	ZENER DIODE		
D18			1S2076A	DIODE		
D19			1SS176	DIODE		
D20		*	RM4ZLF-J1	DIODE		
D21 ,22			EH1Z	DIODE		
D23		*	FMU21S	DIODE		
D24		*	FMU21R	DIODE		
IC1		*	UPC494C	IC(SWITCHING REGULATOR)		
IC2		*	UPC1237HA	IC(POWER AMP)		
Q1 ,2			2SC3419	TRANSISTOR		
Q3 ,4			2SA992(F,E)	TRANSISTOR		
Q5 ,6			2SC1845(F,E)	TRANSISTOR		
Q7 ,8			2SC2590(Q,R)	TRANSISTOR		
Q9 ,10			2SA1110(Q,R)	TRANSISTOR		
Q11 ,12			2SC2003(L,K)	TRANSISTOR		
Q13 ,14			2SA954(L,K)	TRANSISTOR		
Q15 ,16		*	2SC4386*5	TRANSISTOR		
Q17 ,18		*	2SA1671*5	TRANSISTOR		
Q19 ,20			2SC1845(F,E)	TRANSISTOR		
Q21 ,22			2SA733(A)(Q,P)	TRANSISTOR		
Q23			2SC2785(H,F,E)	TRANSISTOR		
Q24			2SA733(A)(Q,P)	TRANSISTOR		
Q25 ,26			2SD809	TRANSISTOR		
Q27 -30		*	2SD1062(Q,R)	TRANSISTOR		
TH1			PTH487A01BC222T	THERMISTOR		

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POWER AMPLIFIER UNIT (X07-2410-11)						
D23	3B		B30-1130-05	LED(SLH-38VC3) RED,P0 IND		
C1 ,2			CK45FB1H102K	CERAMIC 1000PF K		
C3 ,4			CC45FSL1H221J	CERAMIC 220PF J		
C5 ,6			CE04DW1C100M	ELECTRO 10UF 16WV		
C9 ,10		*	C90-1640-05	ELECTRO 100UF 10WV		
C11 ,12			CE04DW1C100M	ELECTRO 10UF 16WV		
C13			CE04DW1A101M	ELECTRO 100UF 10WV		
C14			CE04DW1H2R2M	ELECTRO 2.2UF 50WV		
C15			CE04DW1E4R7M	ELECTRO 4.7UF 25WV		
C16			CE04CW1HR33M	ELECTRO 0.33UF 50WV		
C17 ,18			CE04DW1A101M	ELECTRO 100UF 10WV		
C19			CE04DW1H010M	ELECTRO 1.0UF 50WV		
C20			CE04DW1H2R2M	ELECTRO 2.2UF 50WV		
C21			CE04CW1HR15M	ELECTRO 0.15UF 50WV		
C22			CE04DW1A101M	ELECTRO 100UF 10WV		
C23 ,24			CC45FSL1H221J	CERAMIC 220PF J		
C25 ,26			CF92FV1H472J	MF 4700PF J		
C27 ,28		*	C90-1642-05	ELECTRO 470UF 10WV		
C29 ,30			CC45FSL1H220J	CERAMIC 22PF J		
C31 ,32			CC45FSL1H080D	CERAMIC 8.0PF D		
C33 ,34			CC45FSL1H050C	CERAMIC 5.0PF C		
C35 ,36			CC45FSL1H060D	CERAMIC 6.0PF D		
C37 ,38			CE04DW1C221M	ELECTRO 220UF 16WV		
C39			CE04DW1H010M	ELECTRO 1.0UF 50WV		
C40			CE04DW1A220M	ELECTRO 22UF 10WV		
C41			CE04DW1H010M	ELECTRO 1.0UF 50WV		
C42			CE04DW1E4R7M	ELECTRO 4.7UF 25WV		
C43		*	CE04DW1H221M	ELECTRO 220UF 50WV		
C44			CF92FV1H104J	MF 0.10UF J		
C45			C90-1630-05	NP-ELEC 1000UF 16WV		
C46			CC45FSL1H101J	CERAMIC 100PF J		
C47 ,48			CC45SL1H1S1J	CERAMIC 150PF J		
JK1	2B	*	E13-0241-05	PHONO JACK (RCA IN)		
JK2	2B		E06-0816-05	REC/PLAY JACK (DIN IN)		
37	2B	*	J21-5142-04	JACK MOUNTING HARDWARE		
L1 ,2		*	L33-0344-05	CHOKE COIL		
R75			RD14DB2H100J	SMALL-RD 10 J 1/2W		
R79			RD14DB2H100J	SMALL-RD 10 J 1/2W		
R81		*	RD14DB2H562J	SMALL-RD 5.6K J 1/2W		
VR1	2A		R10-3030-05	POTENTIOMETER(INPUT SESITIVITY		
S1	2A	*	S31-4024-05	SLIDE SWITCH (SUB WOOFER)		
D1 ,2			1SS176	DIODE		
D17 ,18		*	RD20JS(B)	ZENER DIODE		
D19 ,20		*	RD16JS(B)	ZENER DIODE		
D21 ,22			1SS176	DIODE		
D25 ,26			E-152	CONSTANT CURRENT DIODE		
IC1			KKM61	IC(ISOLATION AMP)		
IC2			UPC4570C	IC(OP AMP X2)		
Q1 ,2			2SD1302	TRANSISTOR		
Q3			DTC124EFF	DIGITAL TRANSISTOR		
Q4			DTA124EFF	DIGITAL TRANSISTOR		

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Q5 ,6		*	2SK389	TRANSISTOR		
Q7 -10			2SA992(F,E)	TRANSISTOR		
Q11 -14			2SC2631(Q,R)	TRANSISTOR		
Q15 ,16			2SA1123(Q,R)	TRANSISTOR		
Q17			2SD1266(Q,P)	TRANSISTOR		
Q18			2SB772(Q,P)	TRANSISTOR		
Q19			DTC124EFF	DIGITAL TRANSISTOR		
SCREW SET (N99-0267-05)						
			N46-5063-45	TAPPING SCREW		

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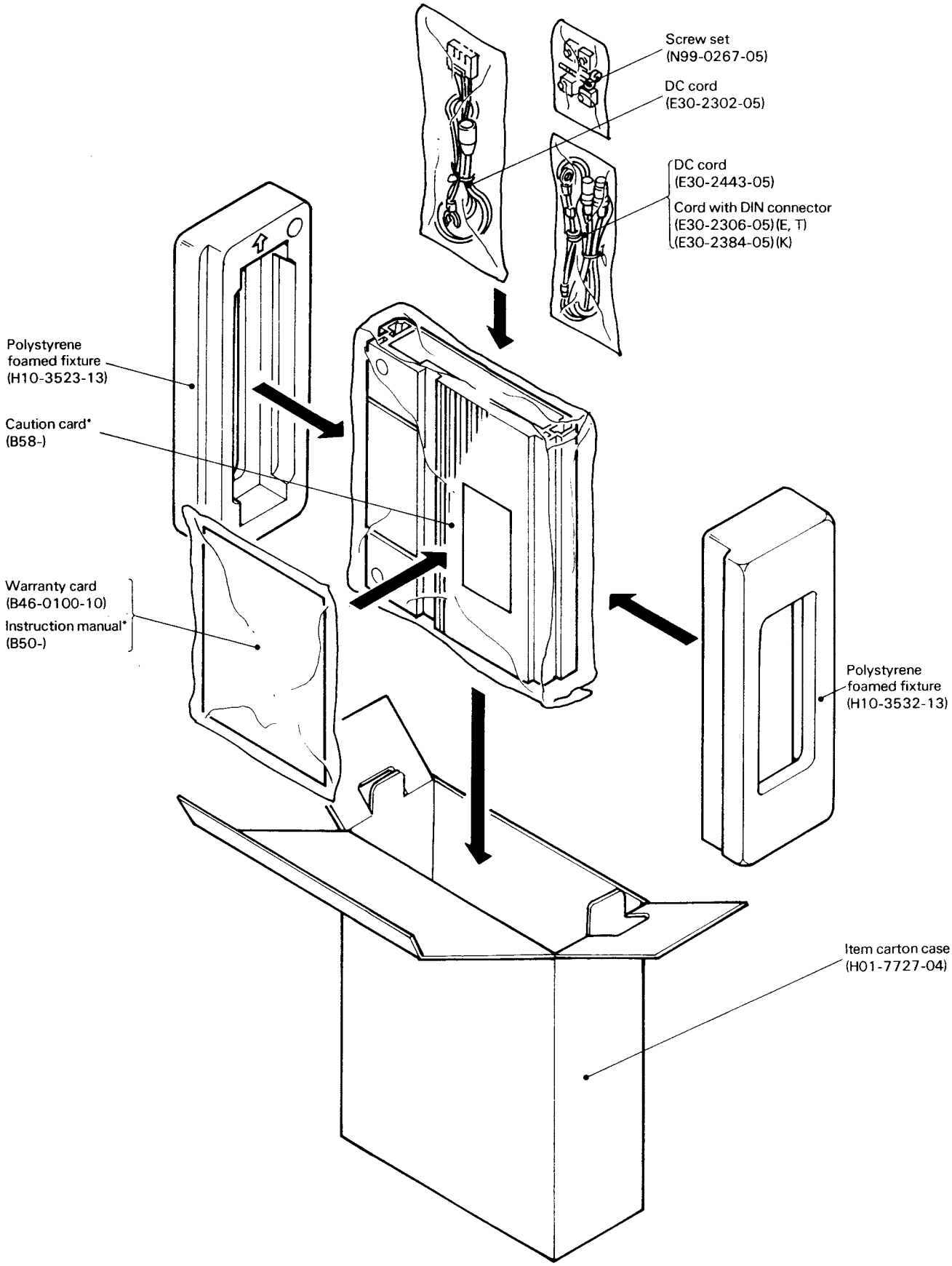
PACKING



* Refer to parts list on page 20.

KAC-820

SPECIFICATIONS

Specifications subject to change without notice

Main amp section

Maximum output power (1 kHz, 4 Ω)	140 W+140 W
Rated output power (10% THD, 1 kHz, 4 Ω)	95 W+95 W
(less than 0.5% THD, 20 Hz—20 kHz, 4 Ω)	75 W+75 W
Frequency response (—3 dB)	2 Hz—100 kHz
Input sensitivity (at rated output) Max	0.1 V
Min.	5.0 V
Signal-to-noise ratio	100 dB
Input impedance	10 kΩ
Damping factor (100 Hz)	More than 200
Sub woofer frequency	50 Hz, 100 Hz

General

Operating voltage (GND)	14.4 V (11—16 V)
Current consumption	20 A
Dimensions (W×H×D)	200×60×300 mm (7-7/8×2-3/8×11-13/16 in.)
Weight	4.0 kg (8.8 lb)

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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